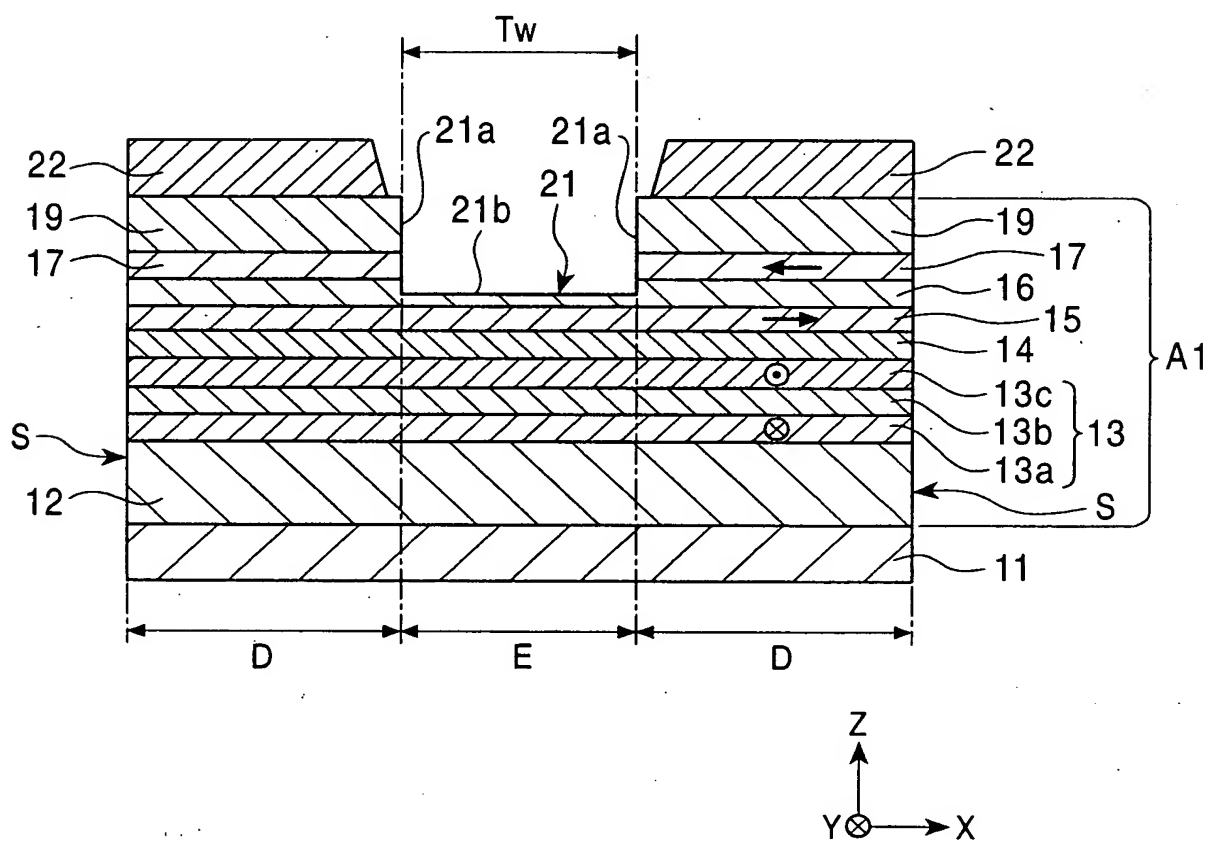


FIG. 1



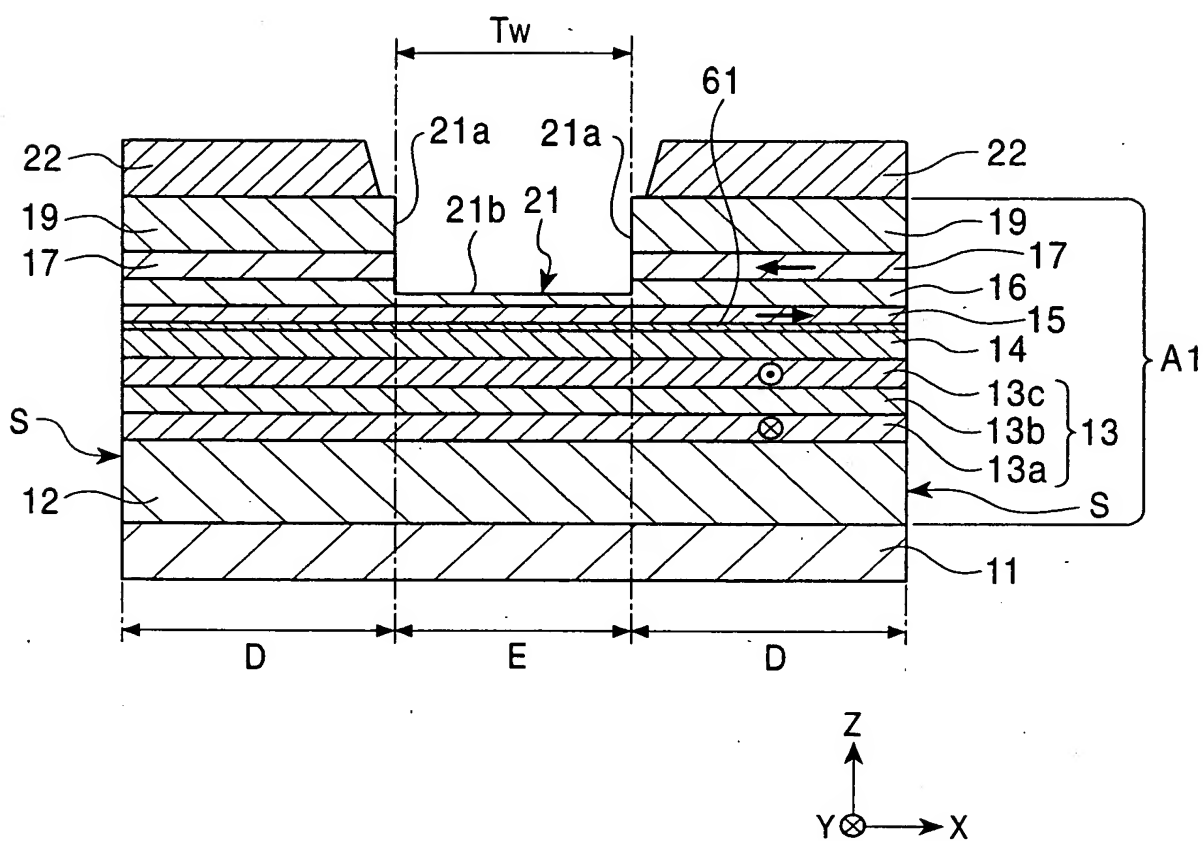


FIG. 3

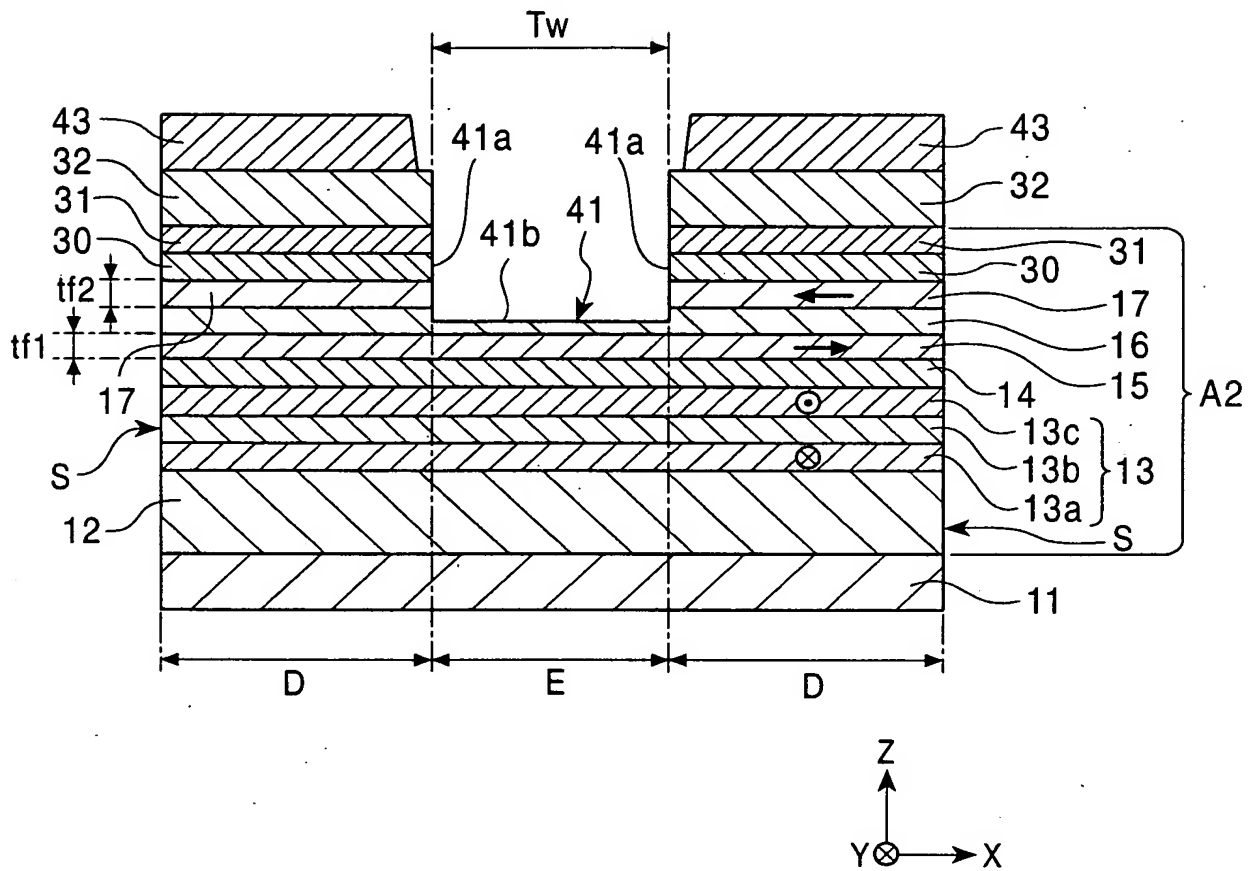
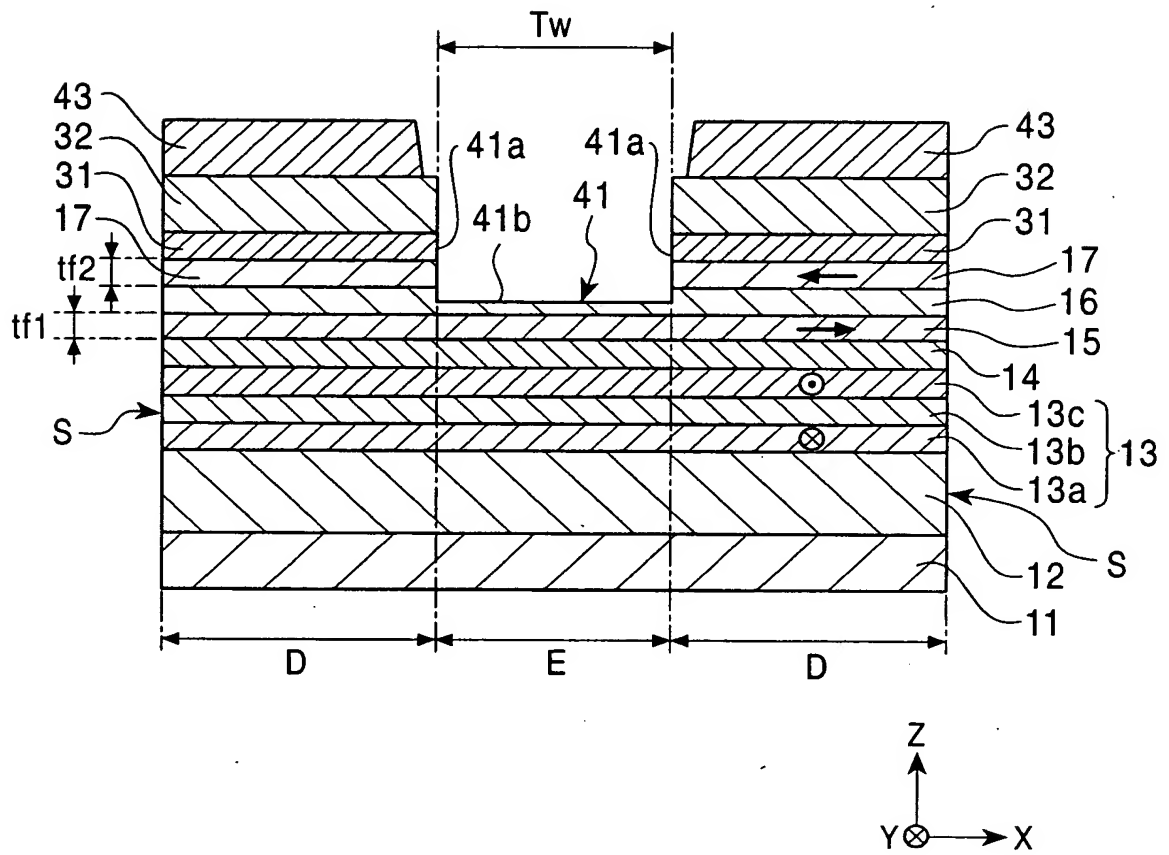
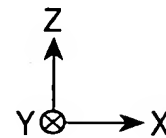


FIG. 4

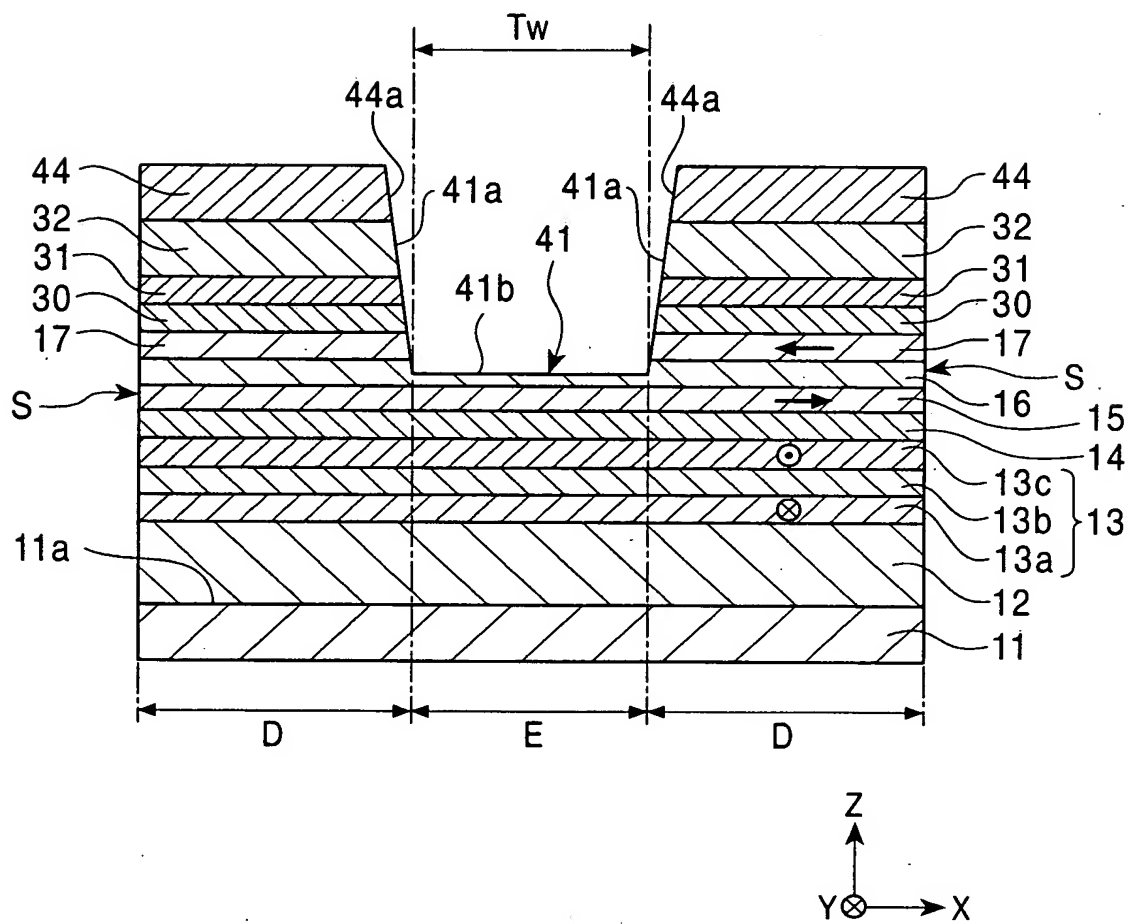


This diagram shows a cross-sectional view of a semiconductor device. A central opening, labeled 41, is formed in the upper layers. The opening has a width labeled Tw and a depth labeled 41b. The top surface of the opening is labeled 41a. The device consists of multiple layers, with labels 43, 32, 30, 17, 16, 15, 14, 13c, 13b, 13a, 12, and 11 indicating different regions or materials. A dimension D is shown for the width of the device on either side of the opening, and E is the width of the opening. A symbol S is used to indicate a specific feature or interface. Arrows indicate the direction of light or signal flow through the device.



[illegible]

FIG. 7



[illegible]

9 / 32

FIG. 9

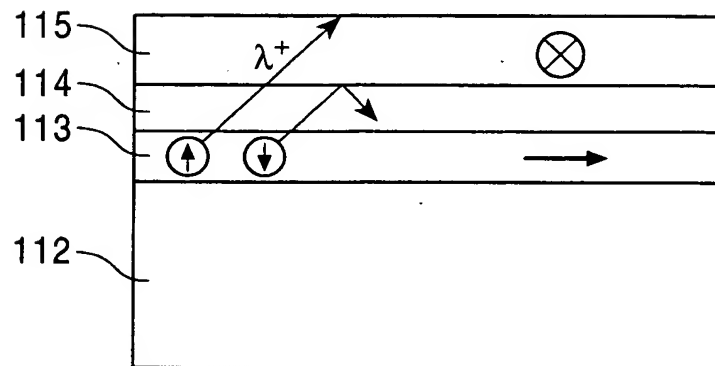


FIG. 10

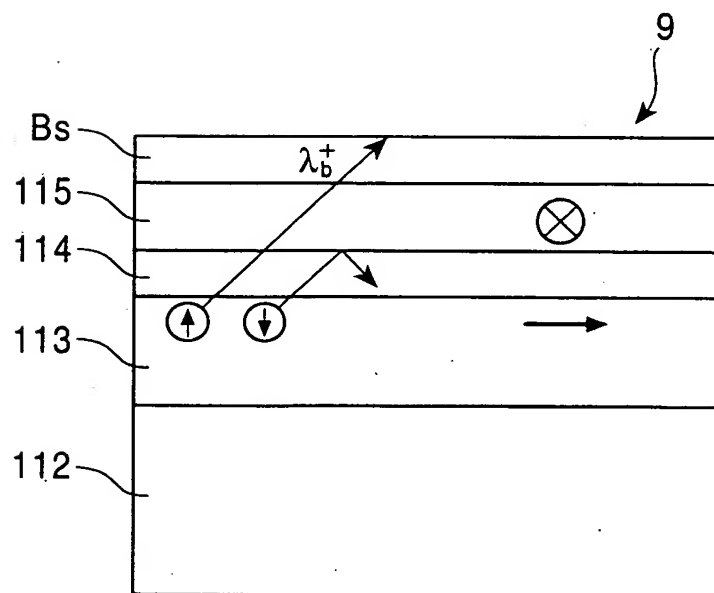


FIG. 11

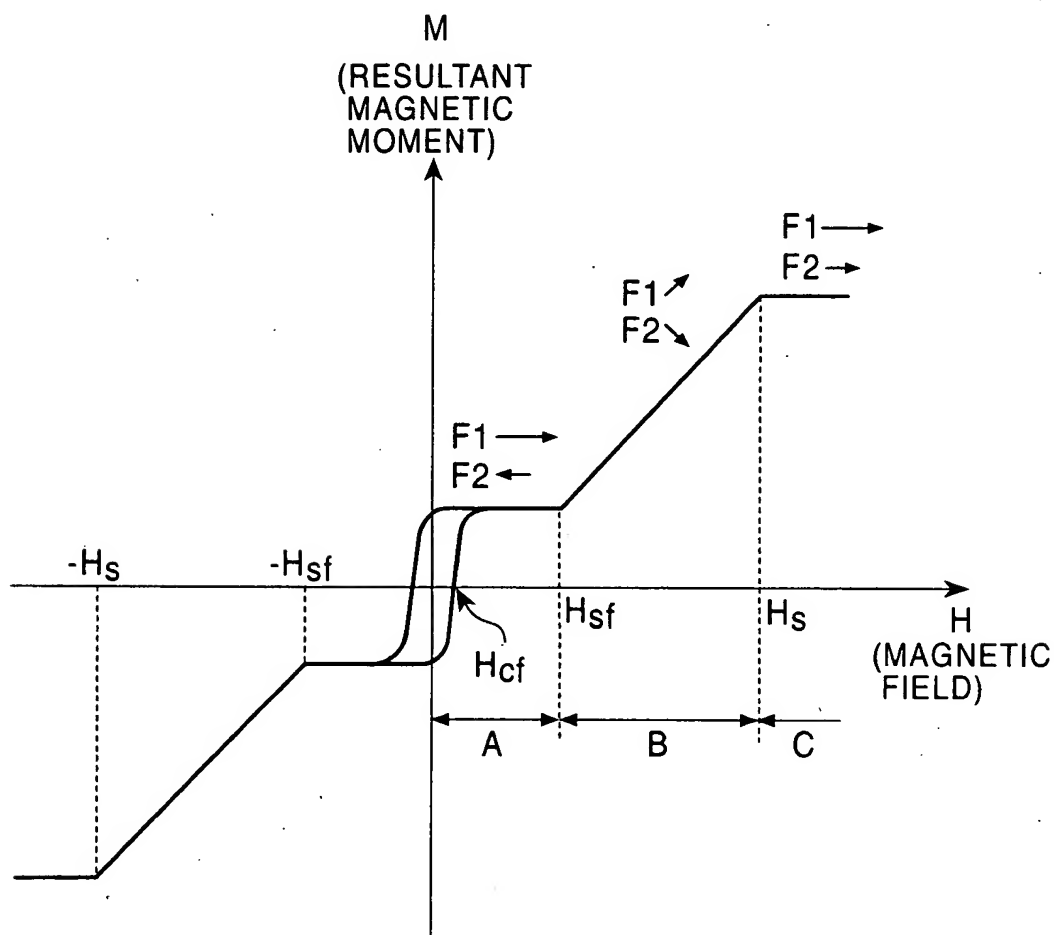
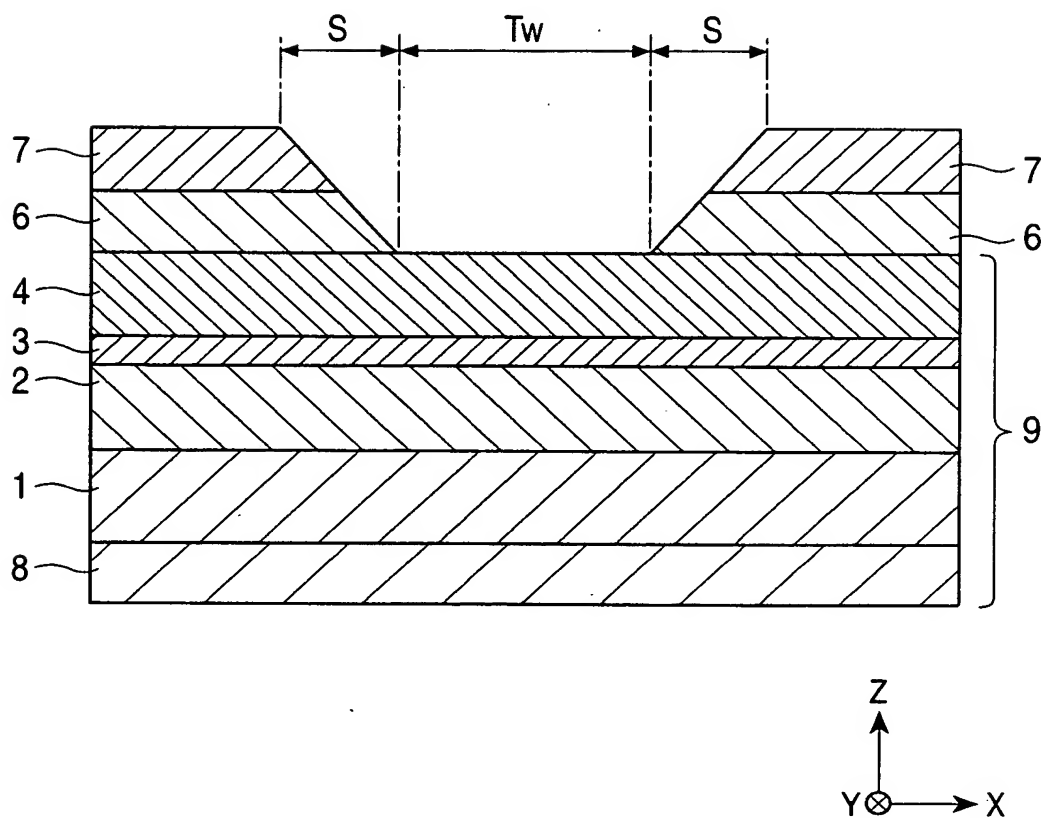
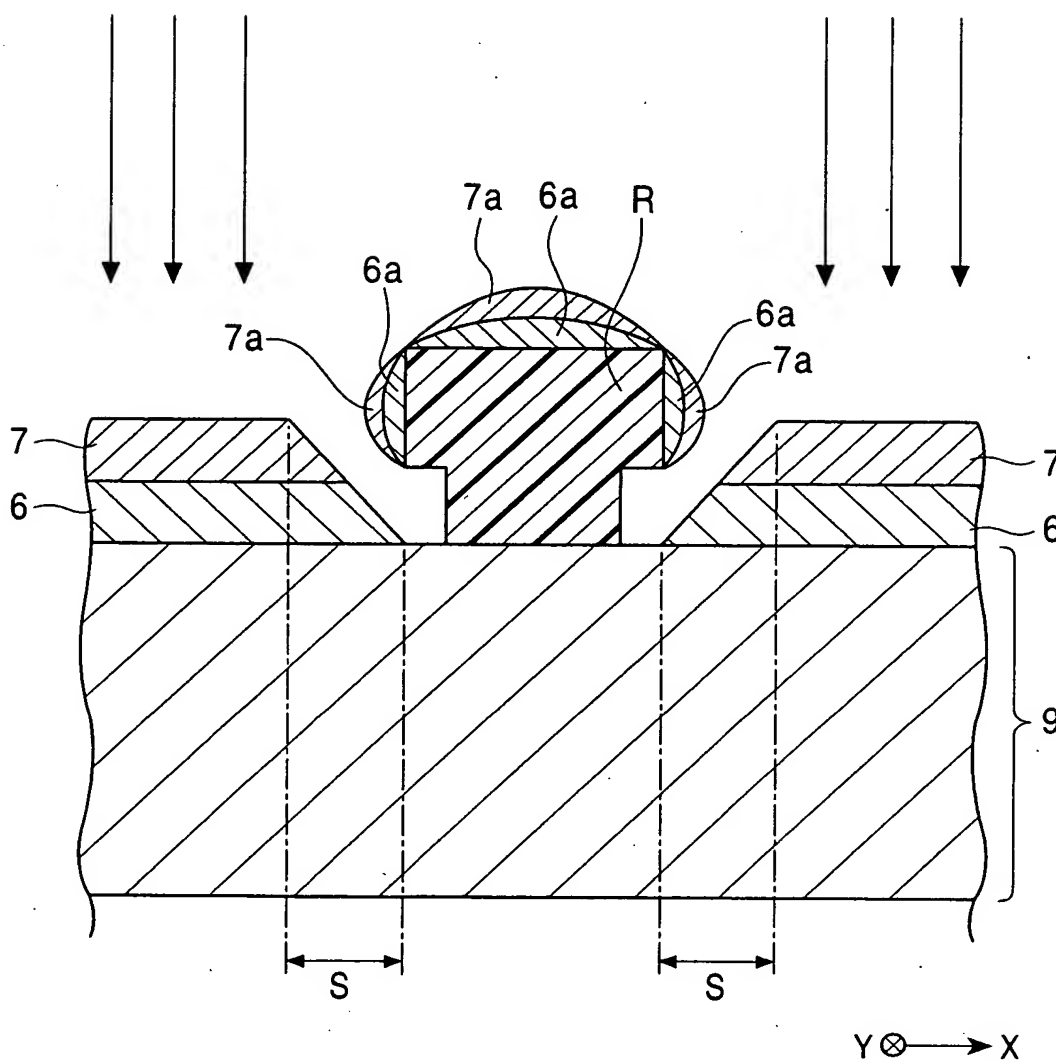


FIG. 12
PRIOR ART





13 / 32

FIG. 14

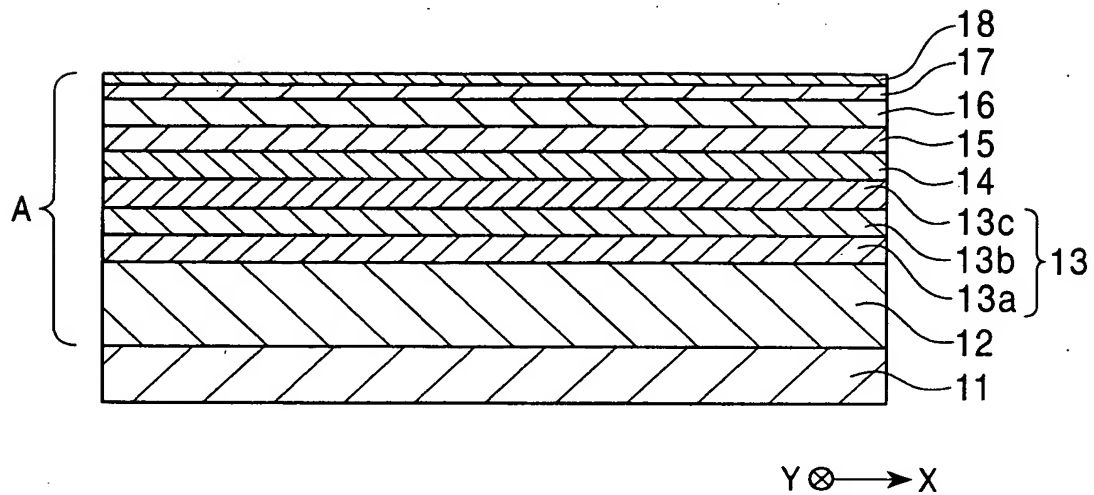
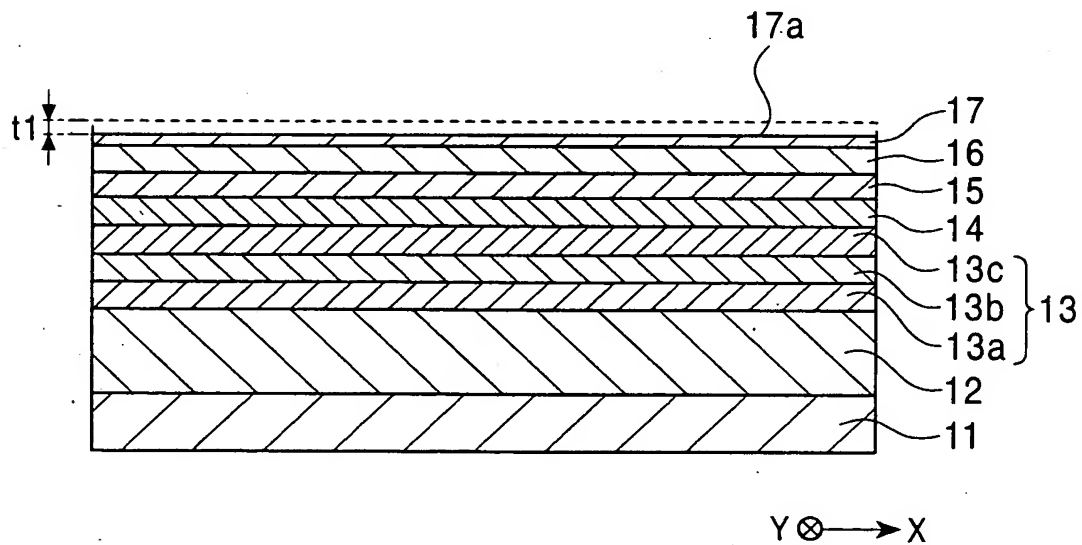


FIG. 15



14 / 32

FIG. 16

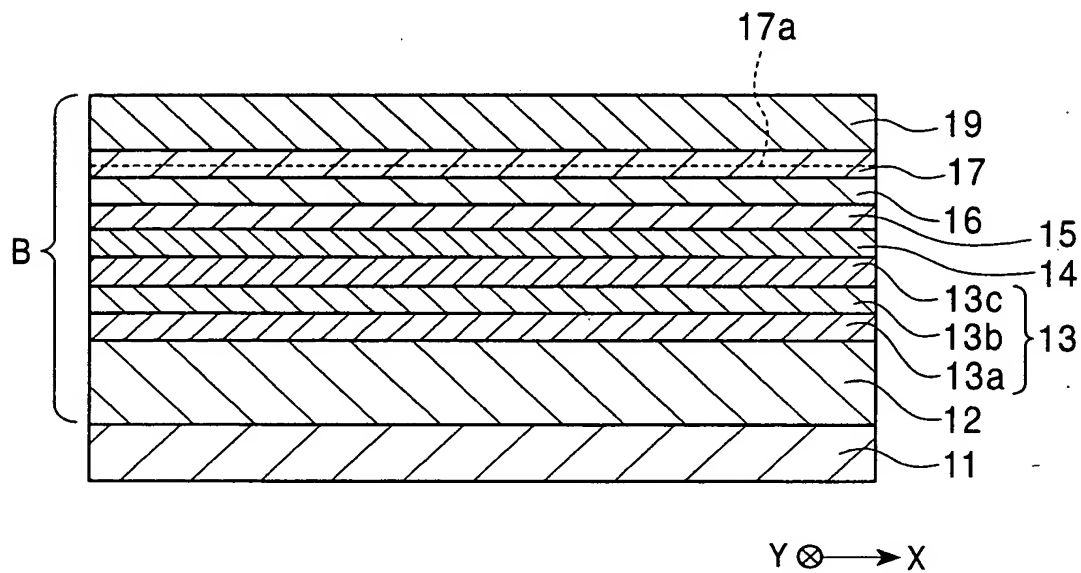
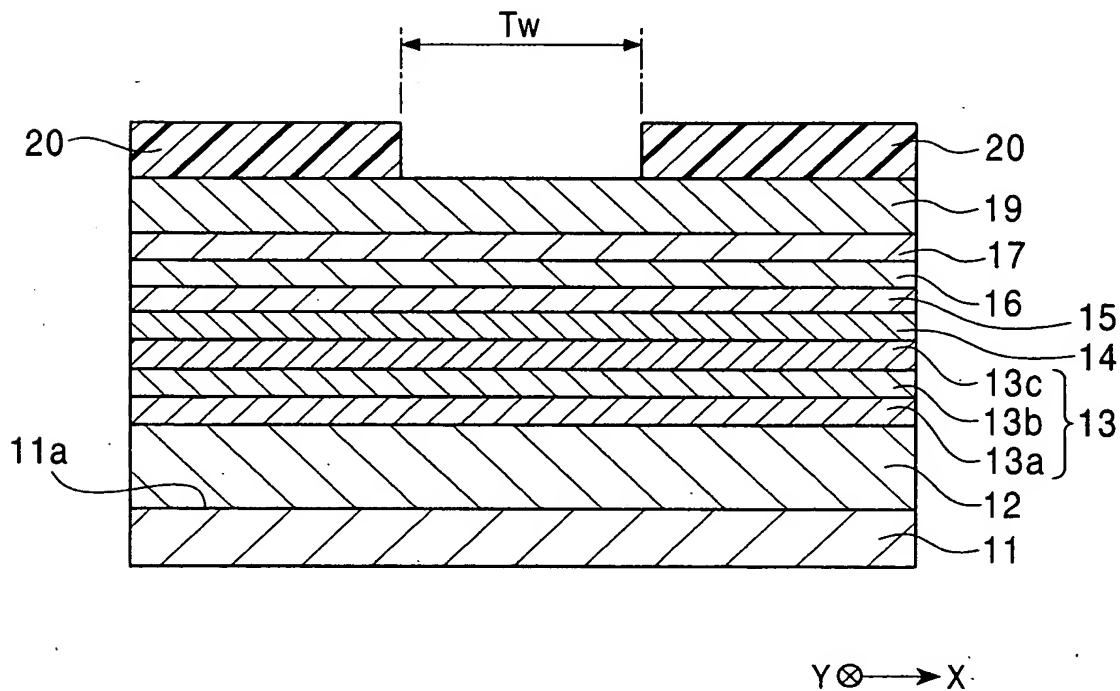


FIG. 17



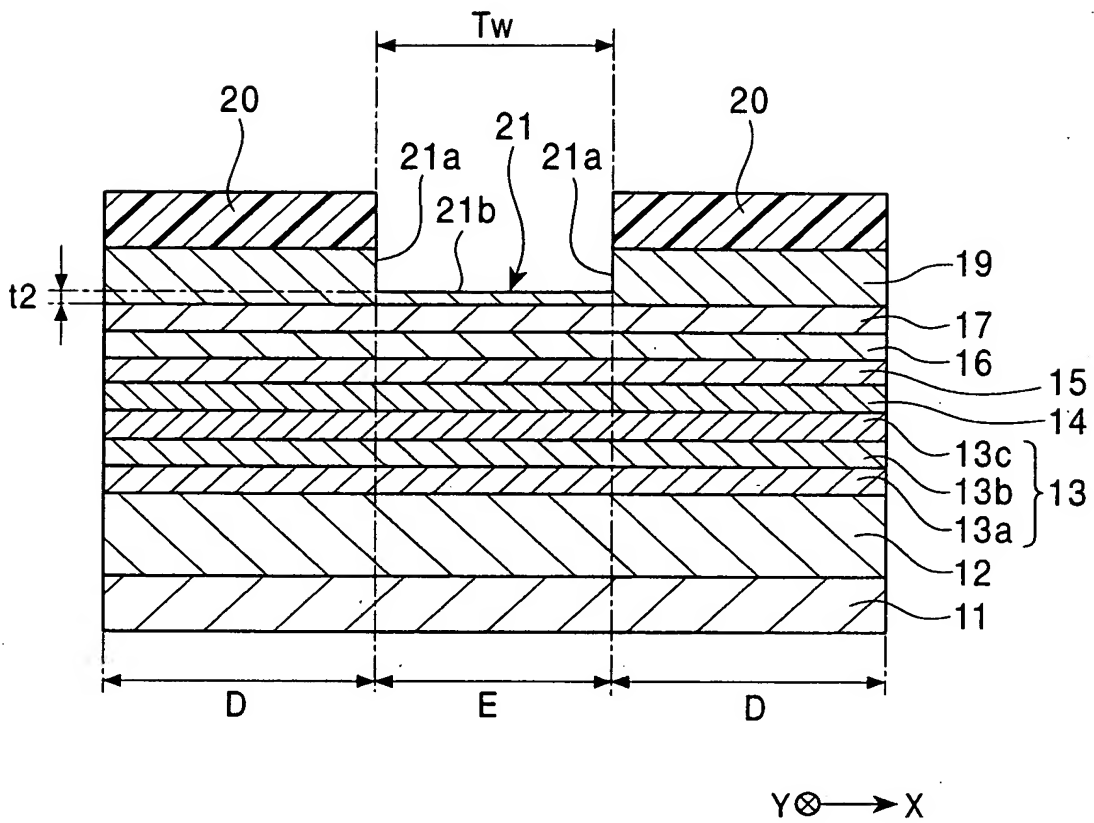
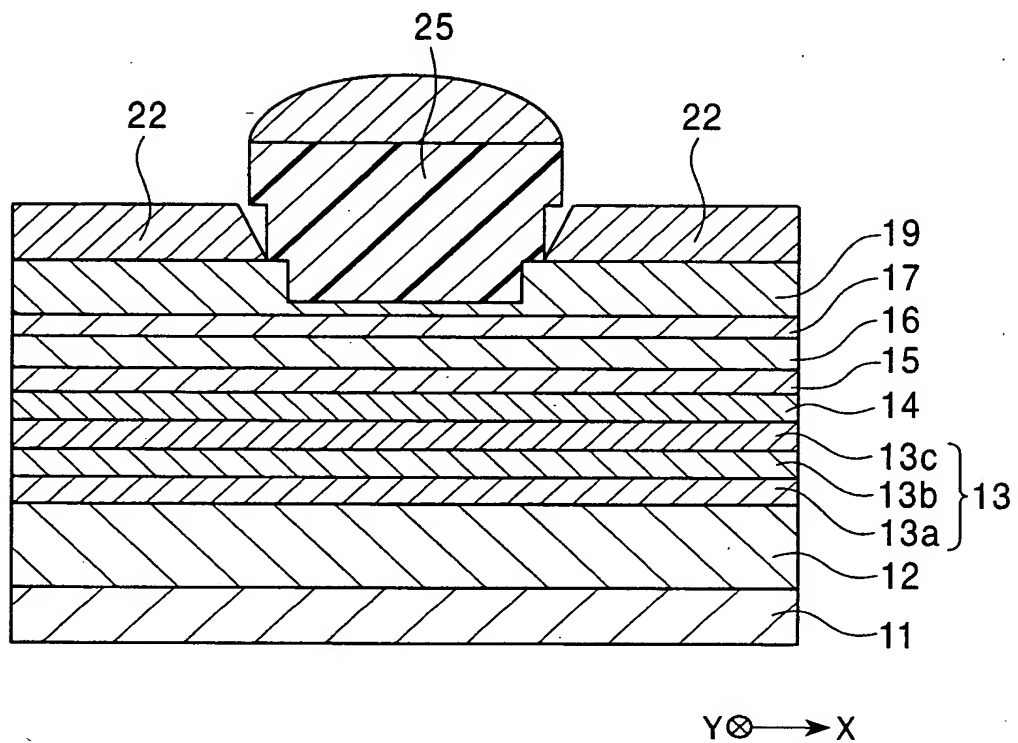


FIG. 19



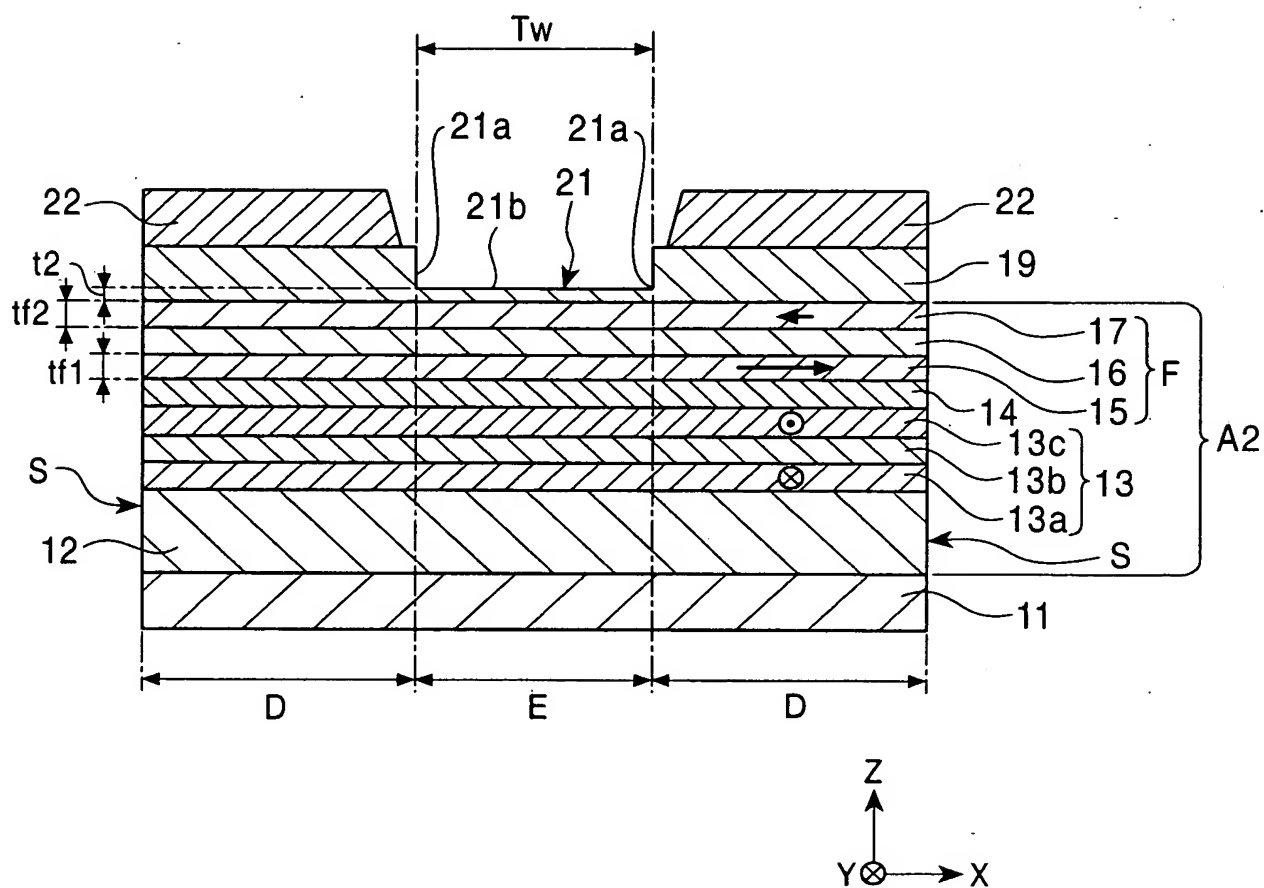
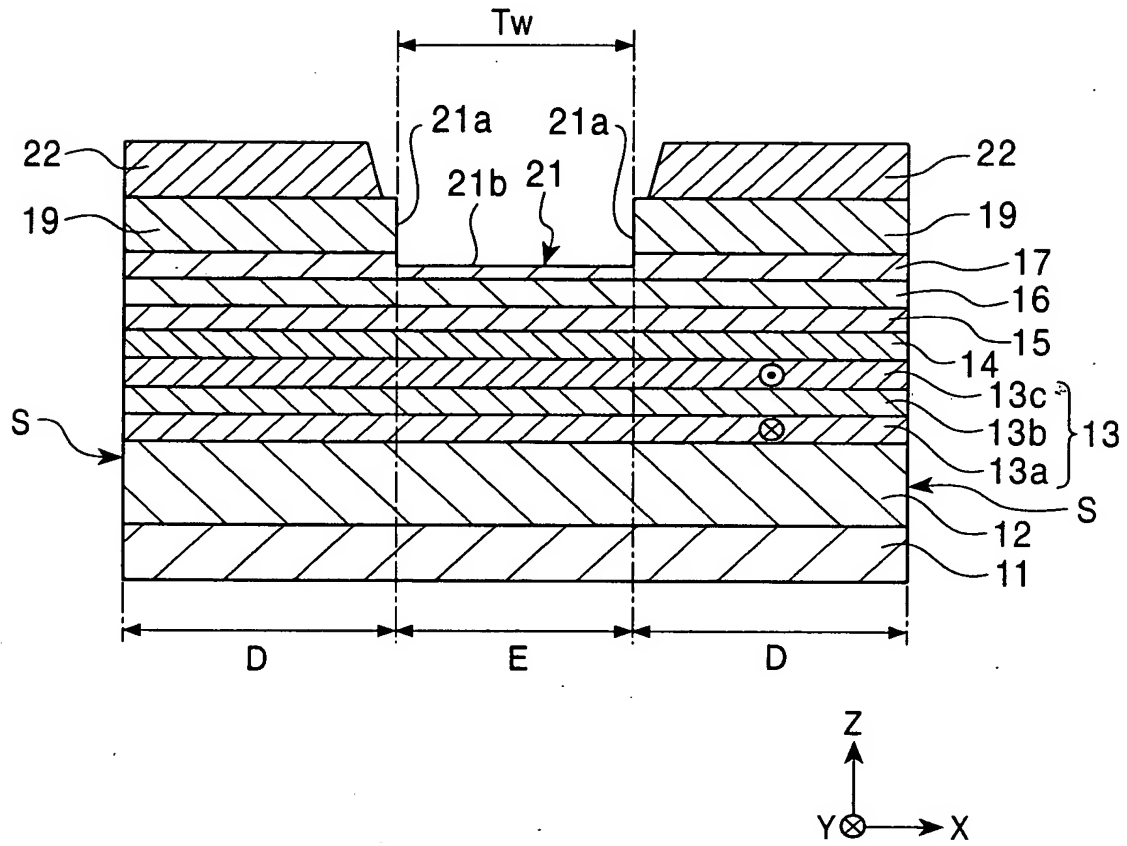
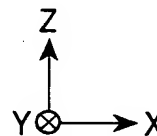


FIG. 21



[illegible]

20 / 32

FIG. 23

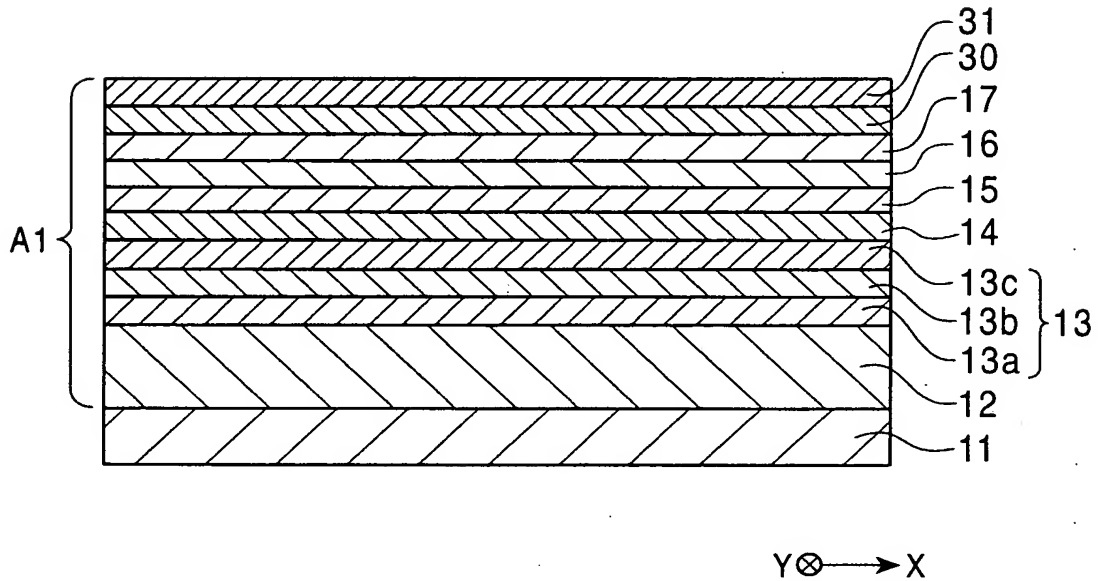


FIG. 24

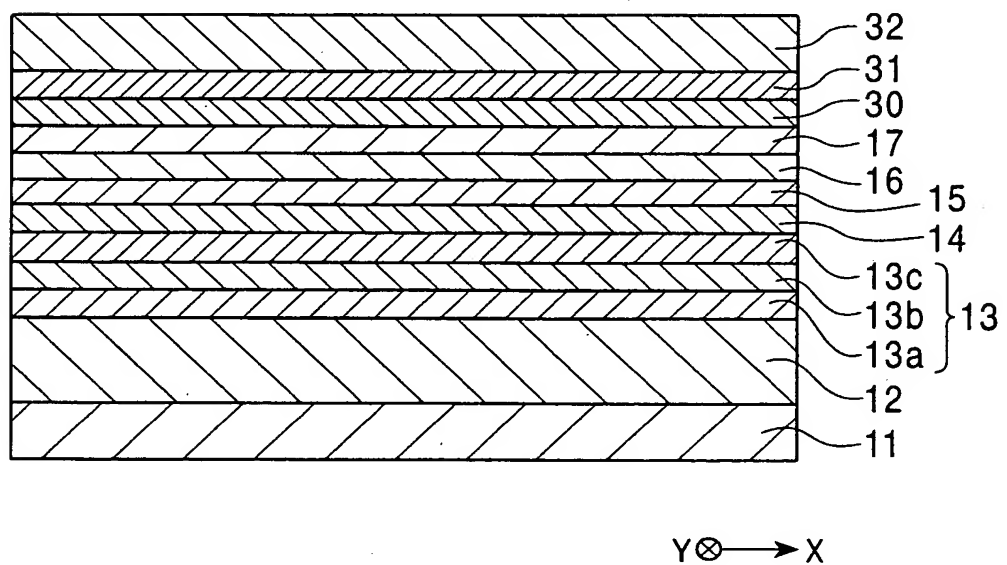


FIG. 25

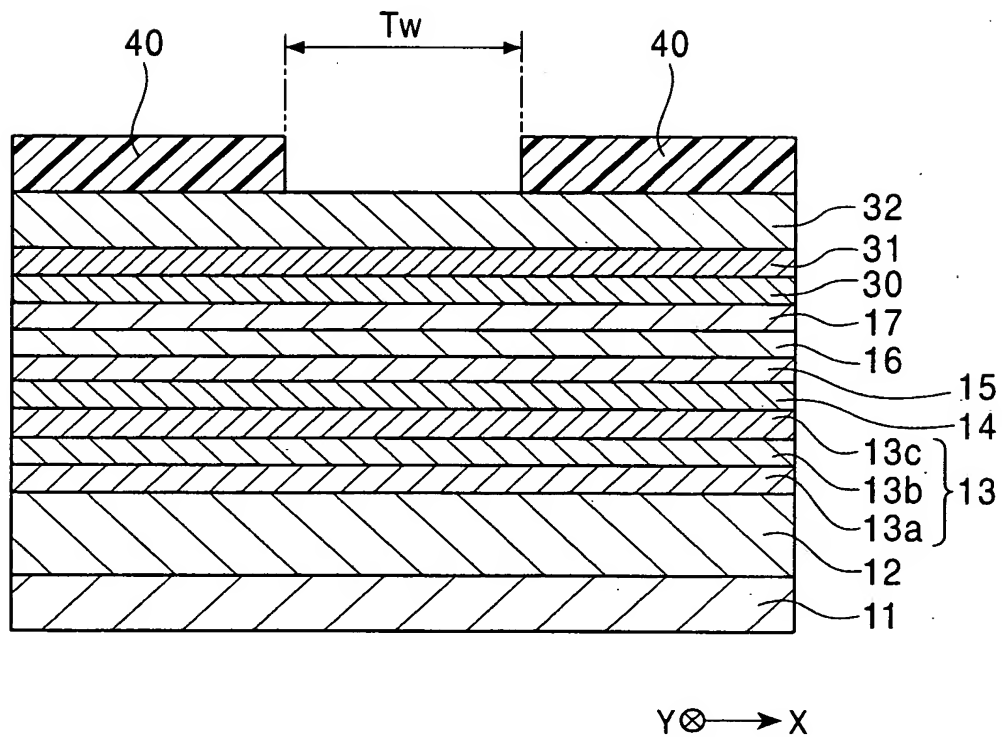


FIG. 26

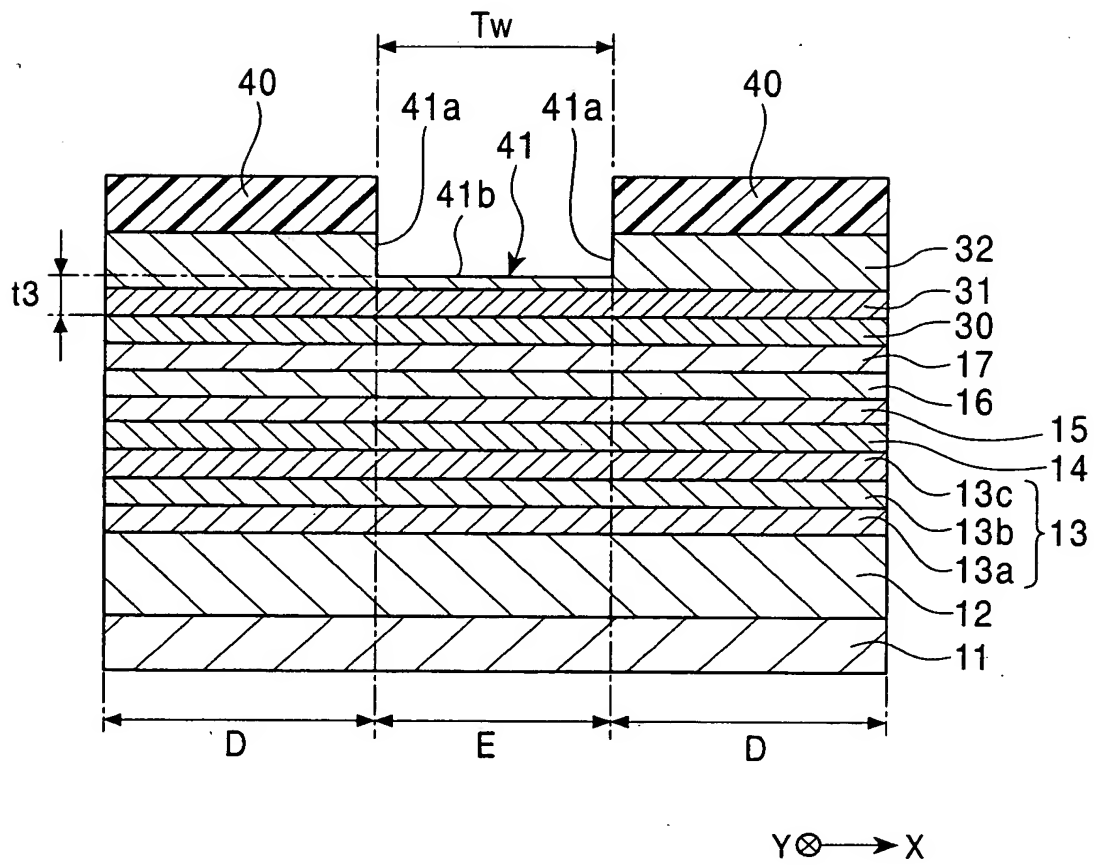
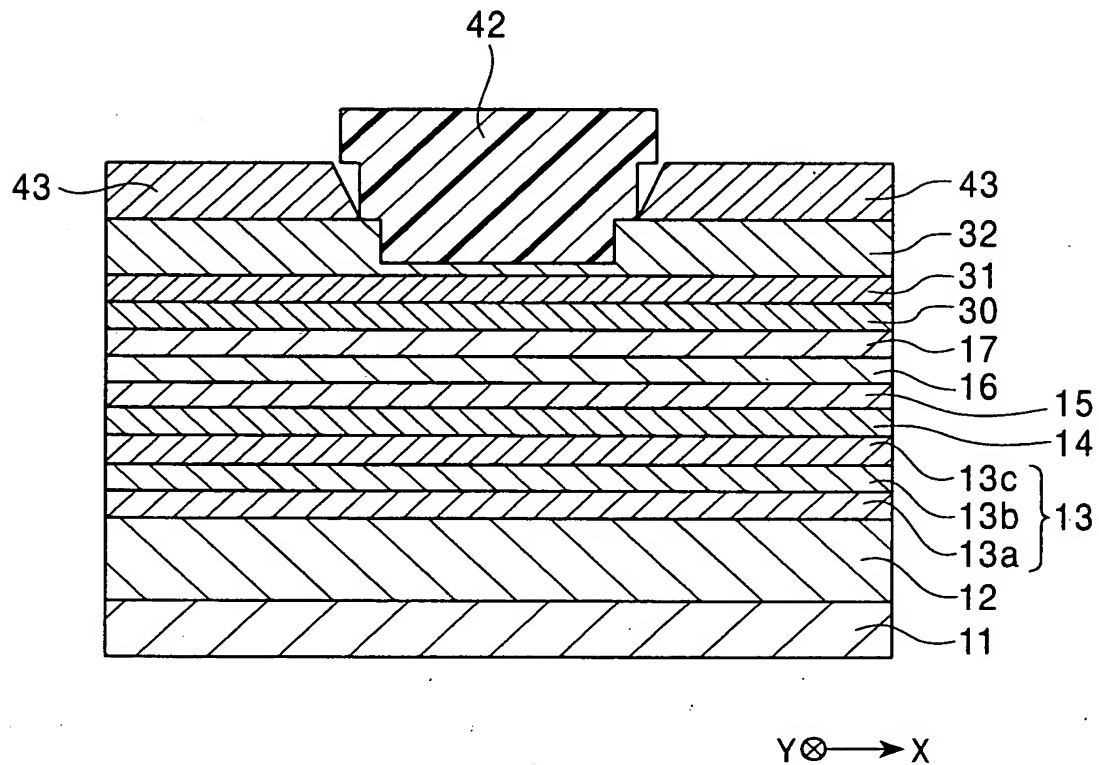


FIG. 27



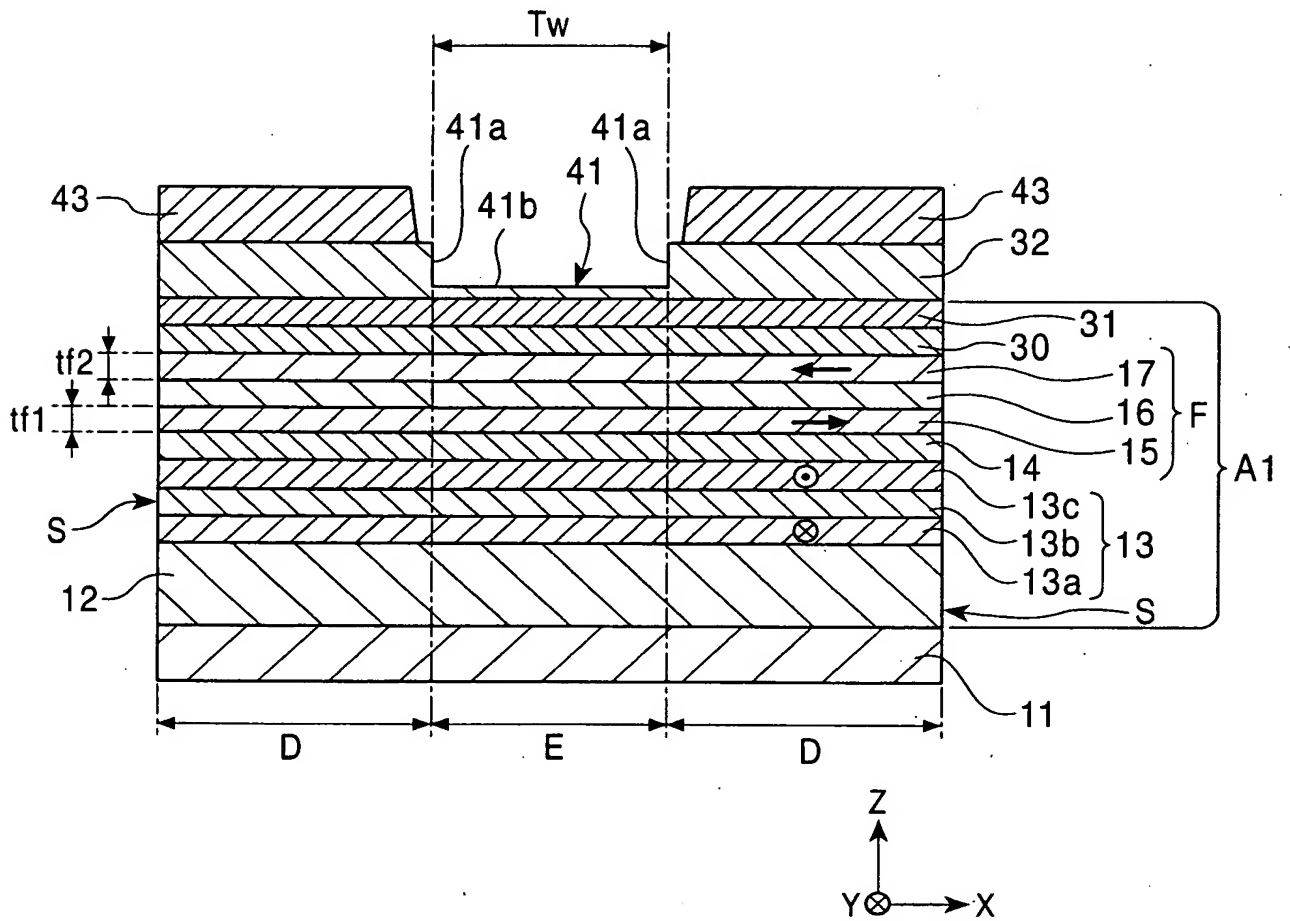
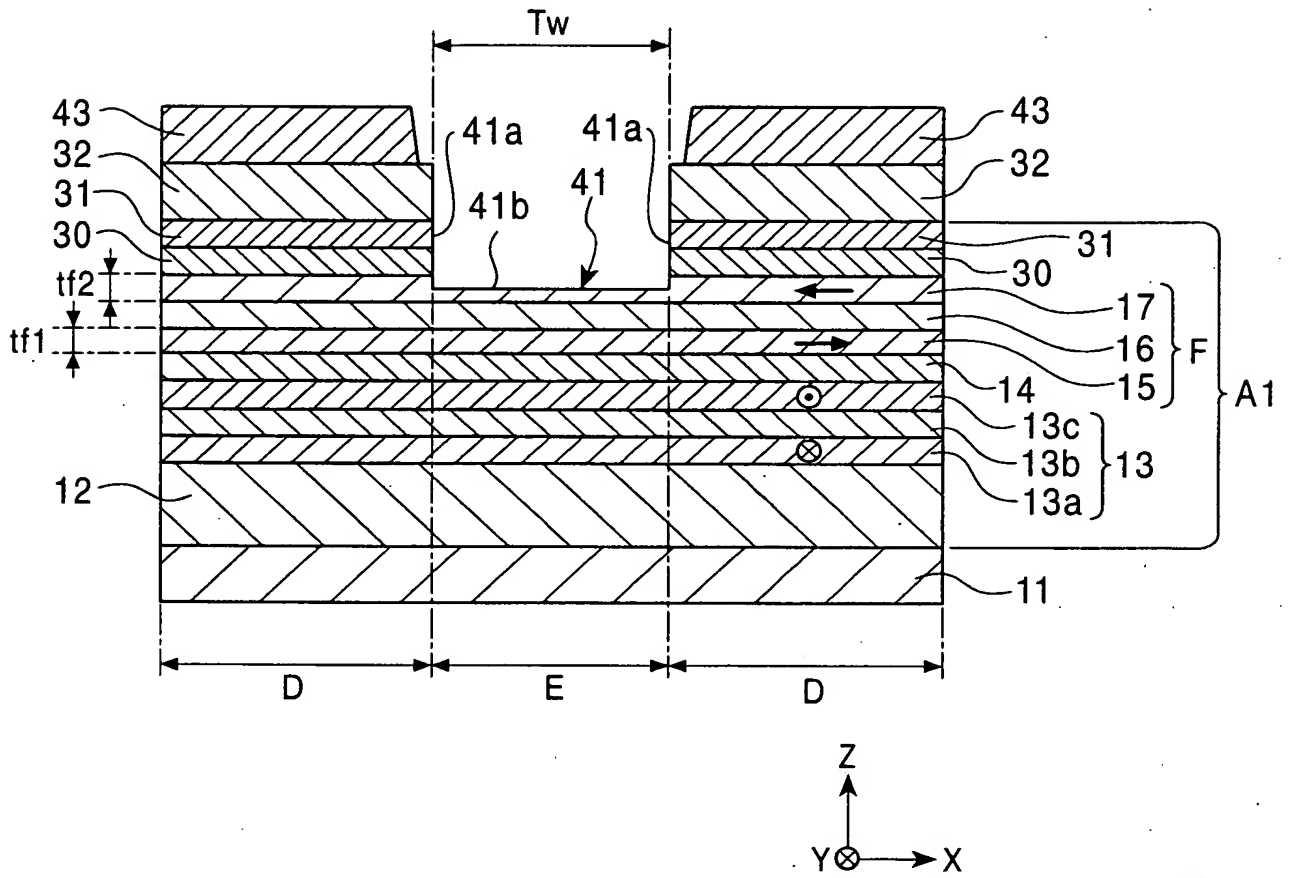


FIG. 29



This diagram is a cross-sectional view of a semiconductor device. It shows a substrate with multiple layers, labeled 11, 12, 13a, 13b, 13c, 14, 15, 16, 17, 19, and 23. A central structure, labeled 23b, is formed on the substrate, featuring a dome-shaped top labeled 51. This central structure is surrounded by a material labeled 51a, and there are trenches labeled 23a on either side. The width of the central structure is indicated by a dimension line labeled Tw. The thickness of the substrate is indicated by a bracket labeled B. A coordinate system is shown at the bottom right, with the X-axis pointing to the right and the Y-axis pointing into the page (indicated by a circle with a cross). The label 11a is also present near the bottom left corner of the substrate.

27 / 32

FIG. 31

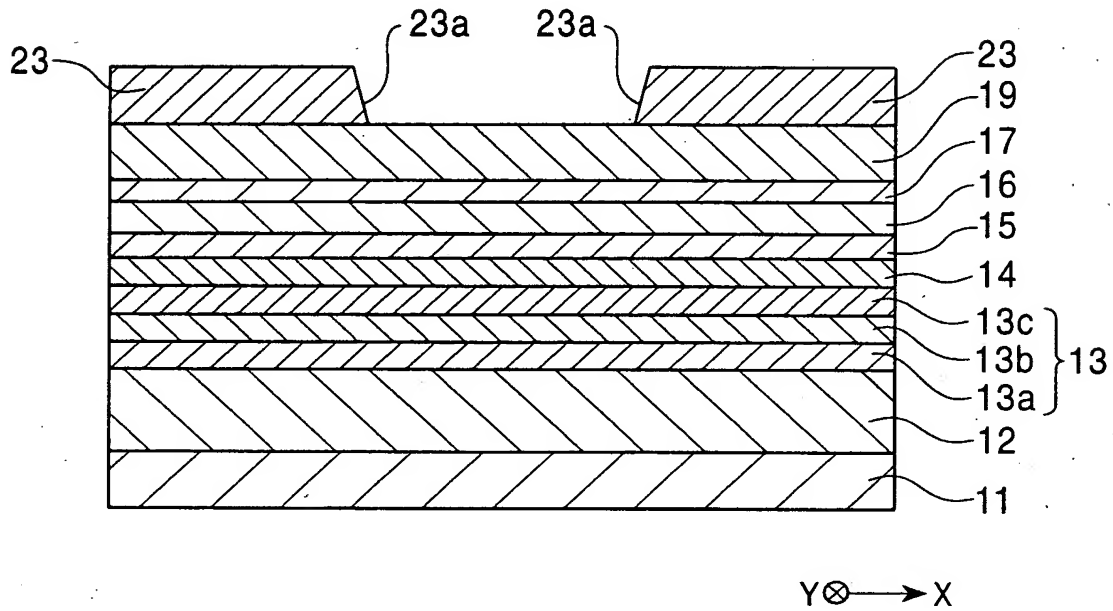
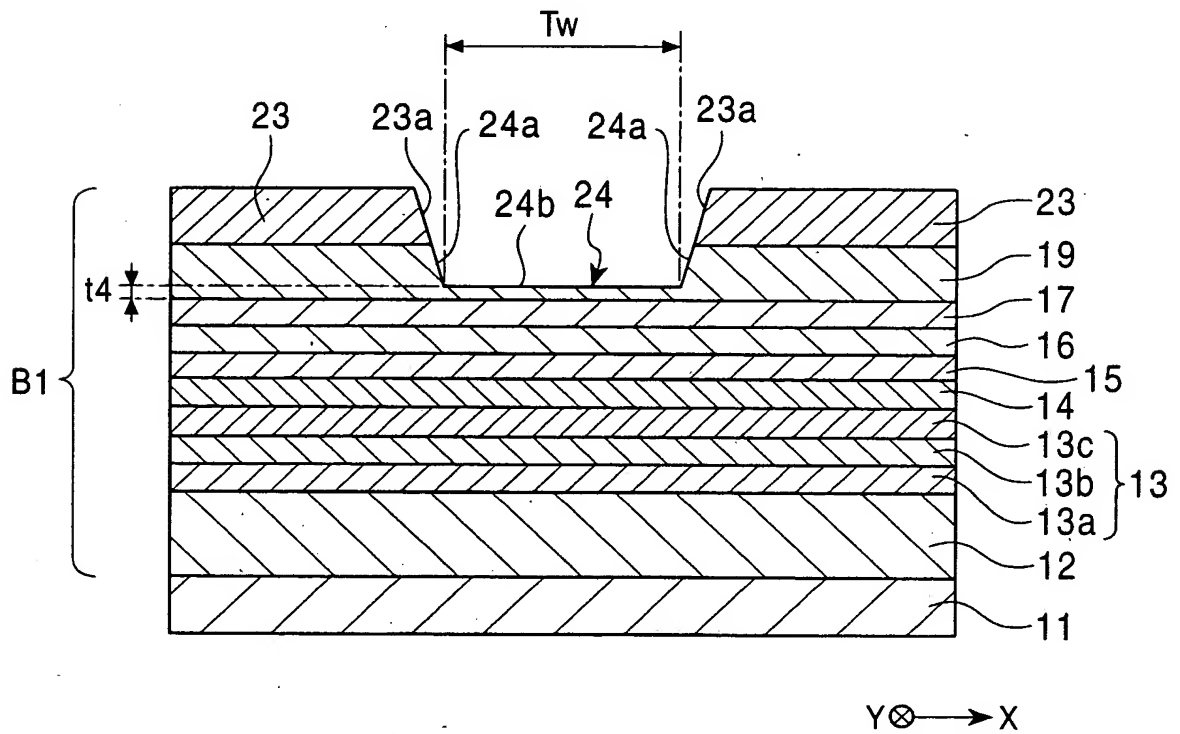
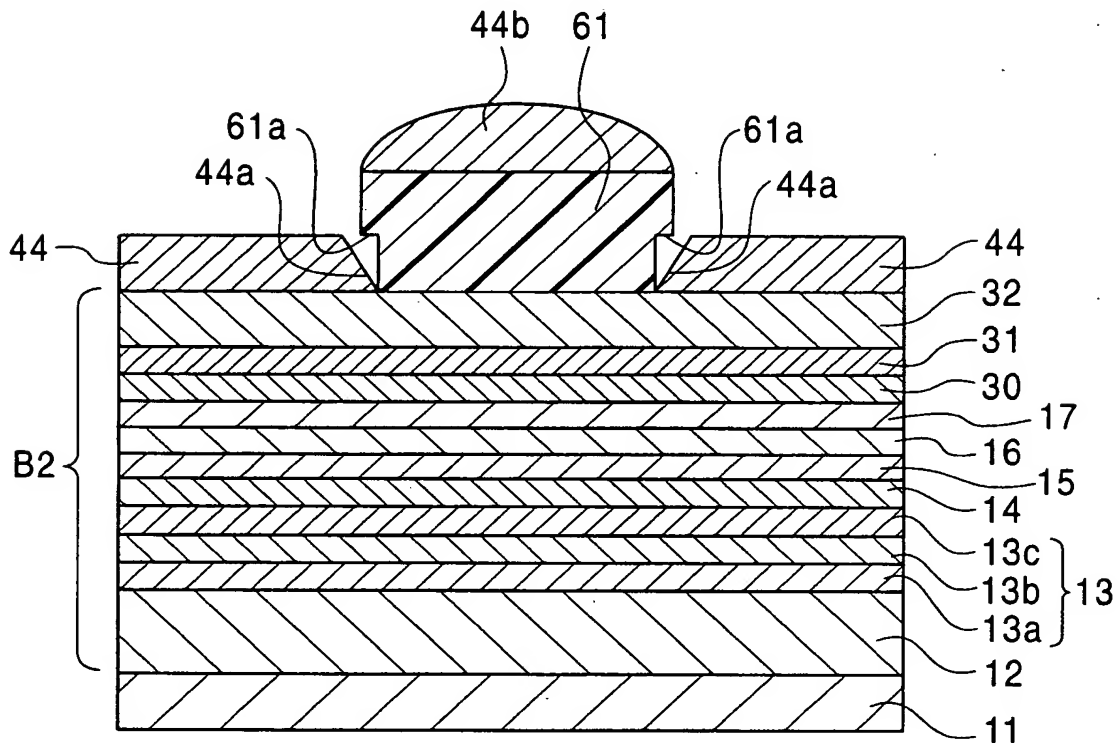


FIG. 32



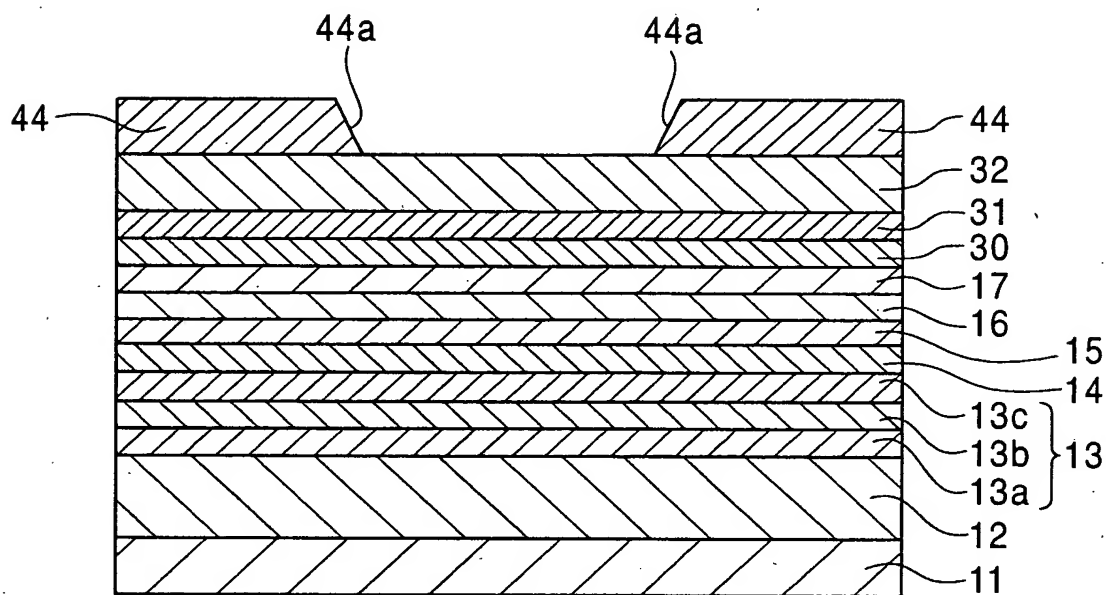
This diagram is a cross-sectional view of a semiconductor device. It shows a substrate with multiple layers labeled 11, 12, 13a, 13b, 13c, 14, 15, 16, 17, 19, and 23. A central region is defined by dashed lines and labeled 24, with its width indicated as Tw . The region 24 is further divided into sub-regions 24a and 24b. The layers 13a, 13b, and 13c are grouped together and labeled 13. The layers 11, 12, and 13 are collectively labeled S. The thickness of layer 23 is indicated as $t4$. The width of the central region 24 is indicated as E , and the width of the side regions is indicated as D . A coordinate system (X, Y, Z) is shown at the bottom right, with Z pointing upwards, X pointing to the right, and Y pointing out of the page (indicated by a circle with a cross).

FIG. 34



30 / 32

FIG. 35



$Y \otimes \rightarrow X$

FIG. 36

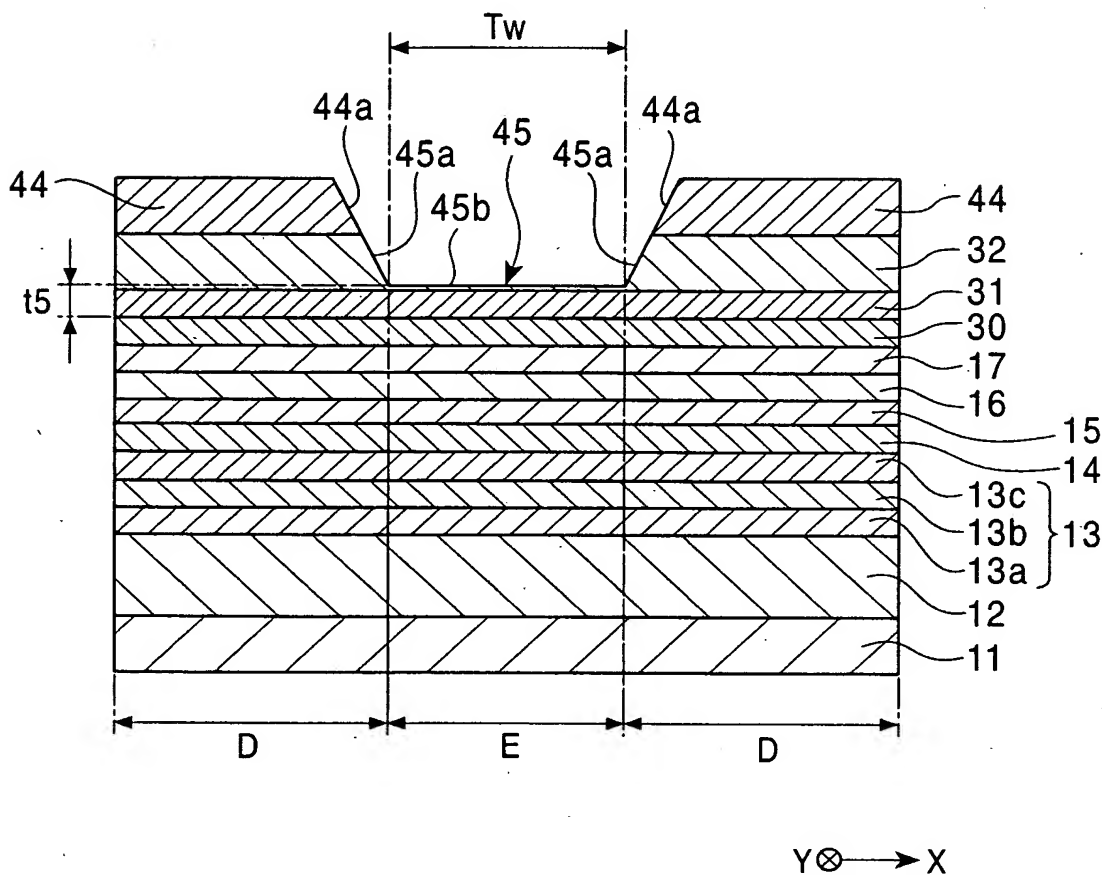


FIG. 37

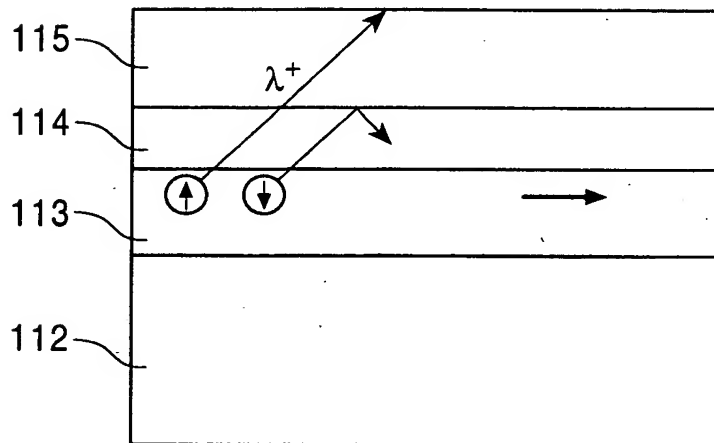


FIG. 38

